Tactical Vehicle Systems, LP

NDIA NET3 Conference

FMTV Systems Integration

Regis Luther

VP Engineering & Product Development

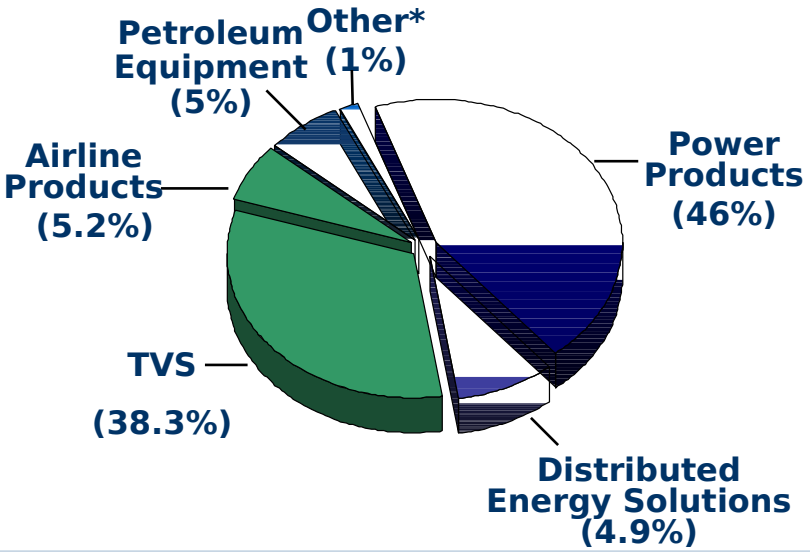
July 23, 2003

ISO/TS 16949:2002
Certificate No: 38106
IATF
Certificate No: 0009878

Stewart & Stevenson

- Founded in 1902
- Manufacturer, distributor, and service provider for engine-driven equipment
- 4,000+ employees/1,000+ service technicians/200+ engineering positions
- Publicly traded on NYSE (SVC)
- $1.16 billion in total sales in FY 2002

Corporate Headquarters
Houston, Texas



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Family of Medium Tactical Vehicles

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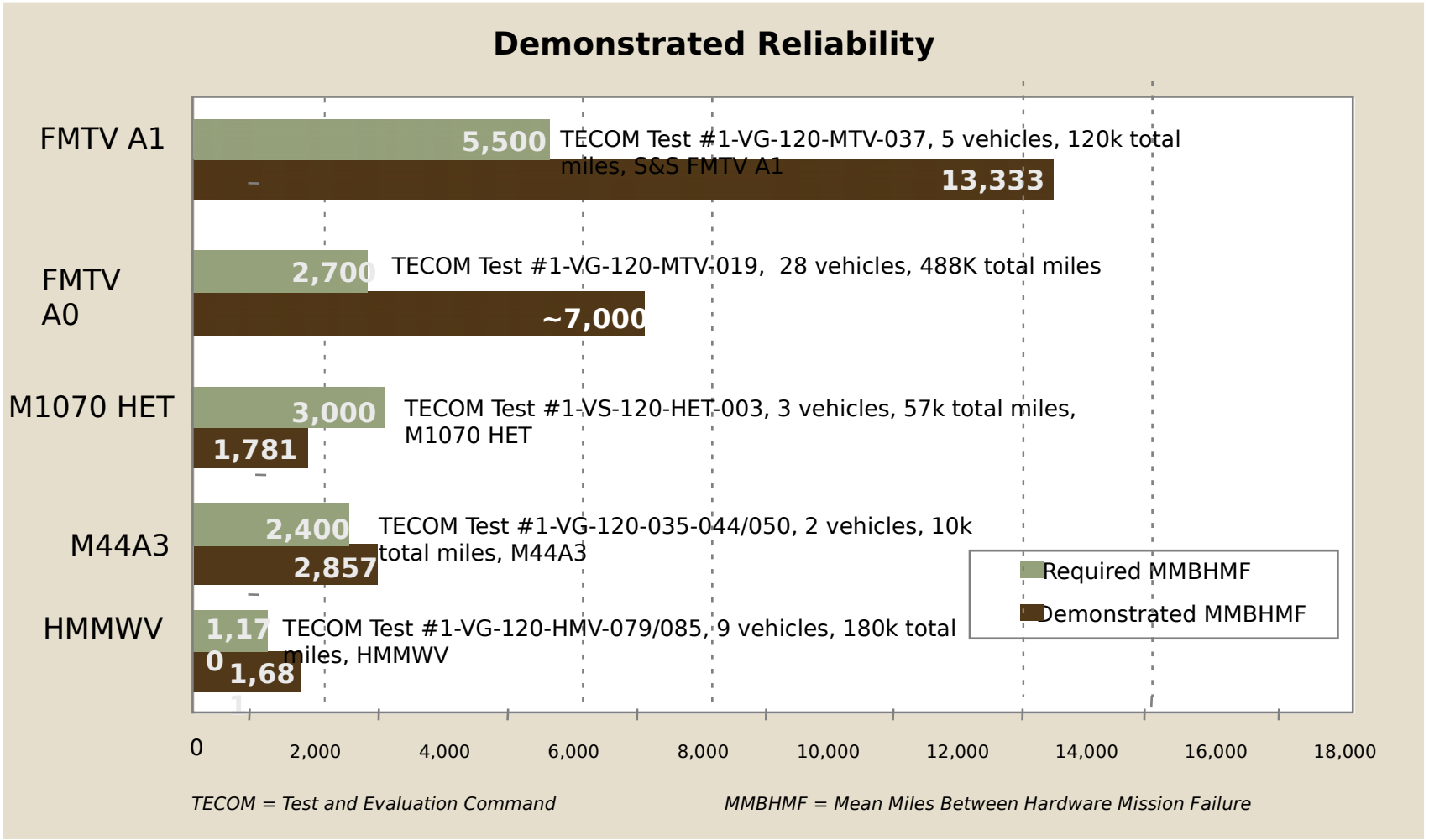
Ultra-Reliability



* Fleet average of test vehicles including all failures attributed to CR changes and A1 baseline.

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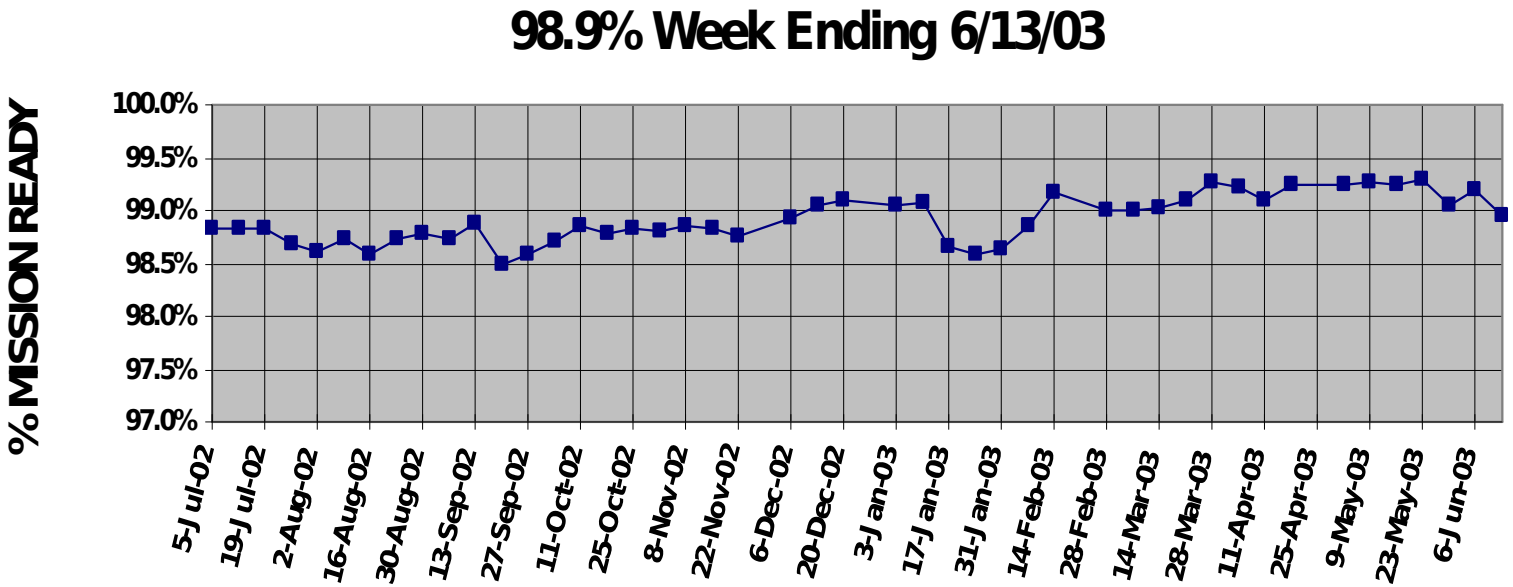
Vehicle Readiness Trend - Consolidated



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High Operational Readiness

Readiness Status of Major Weapon Systems (Percentage)		
Weapons Systems	Availability Goal	Actual Availability
FMTV	90	96
HMMWV	90	94
M198	90	93
MLRS	90	93
M3 Bradley	90	93
Avenger	90	93
M1A2 Abrams Tank	90	92
M2 Bradley	90	92
PLS-Truck	90	91
5-Ton Truck	90	91
OH-58D Helicopter	90	90
M109	90	89
HEMTT	90	88
UH-60 Helicopter	75	82
M1A1 Abrams Tank	75	82
AH-64 Helicopter	75	80
CH-47D Helicopter	75	66

Source: U.S. Army Status of Resources and Training System (SORTS) Database (Sep 2002)

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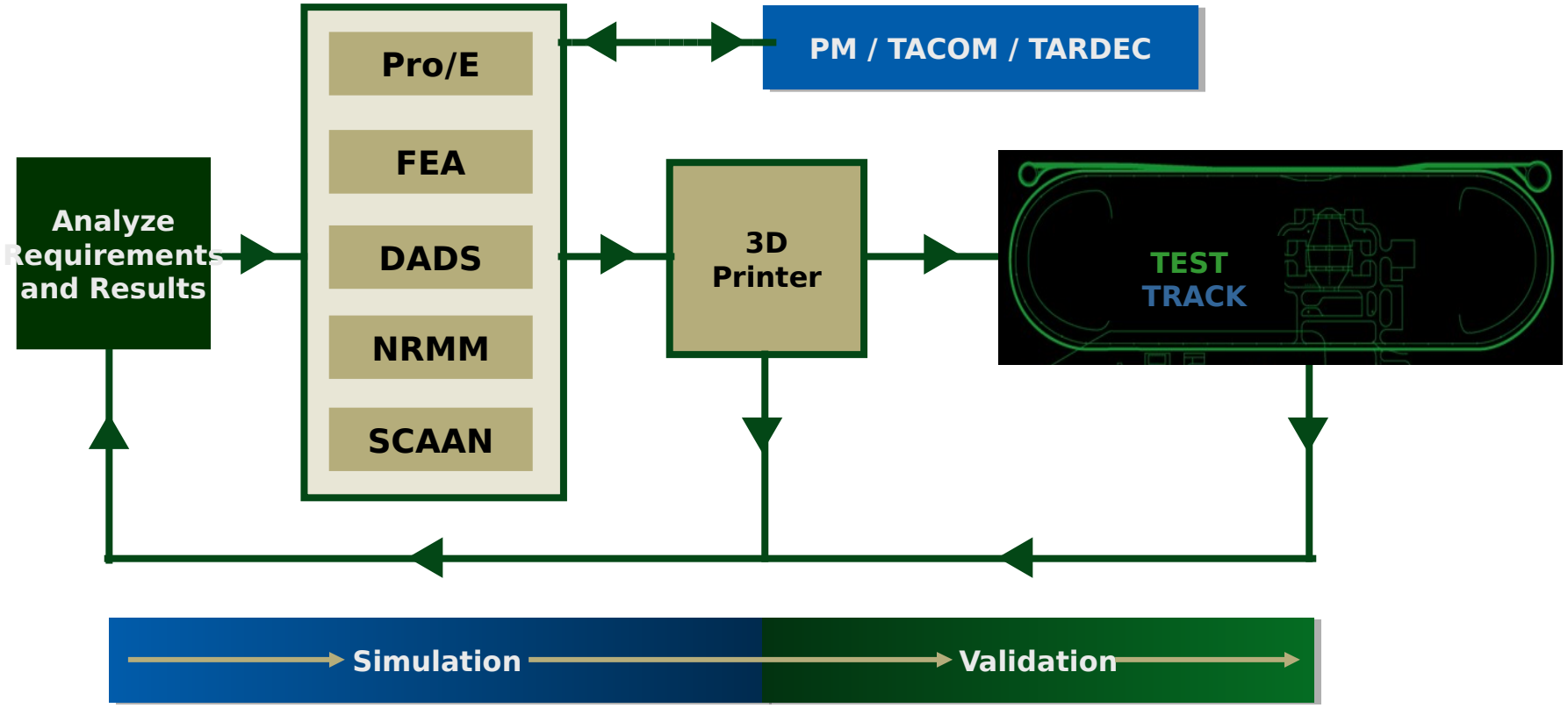
Modeling and Simulation



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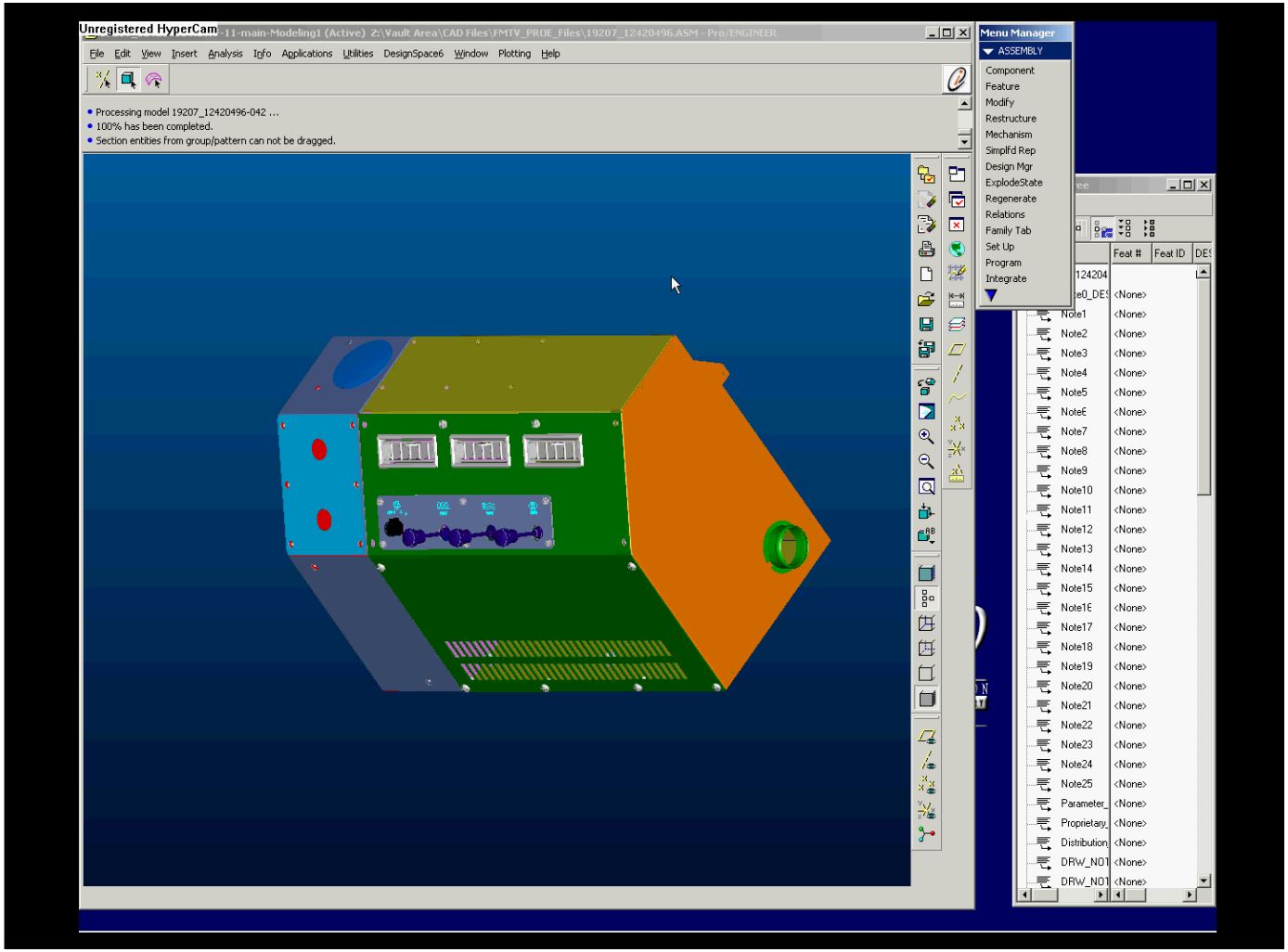
Pro/E



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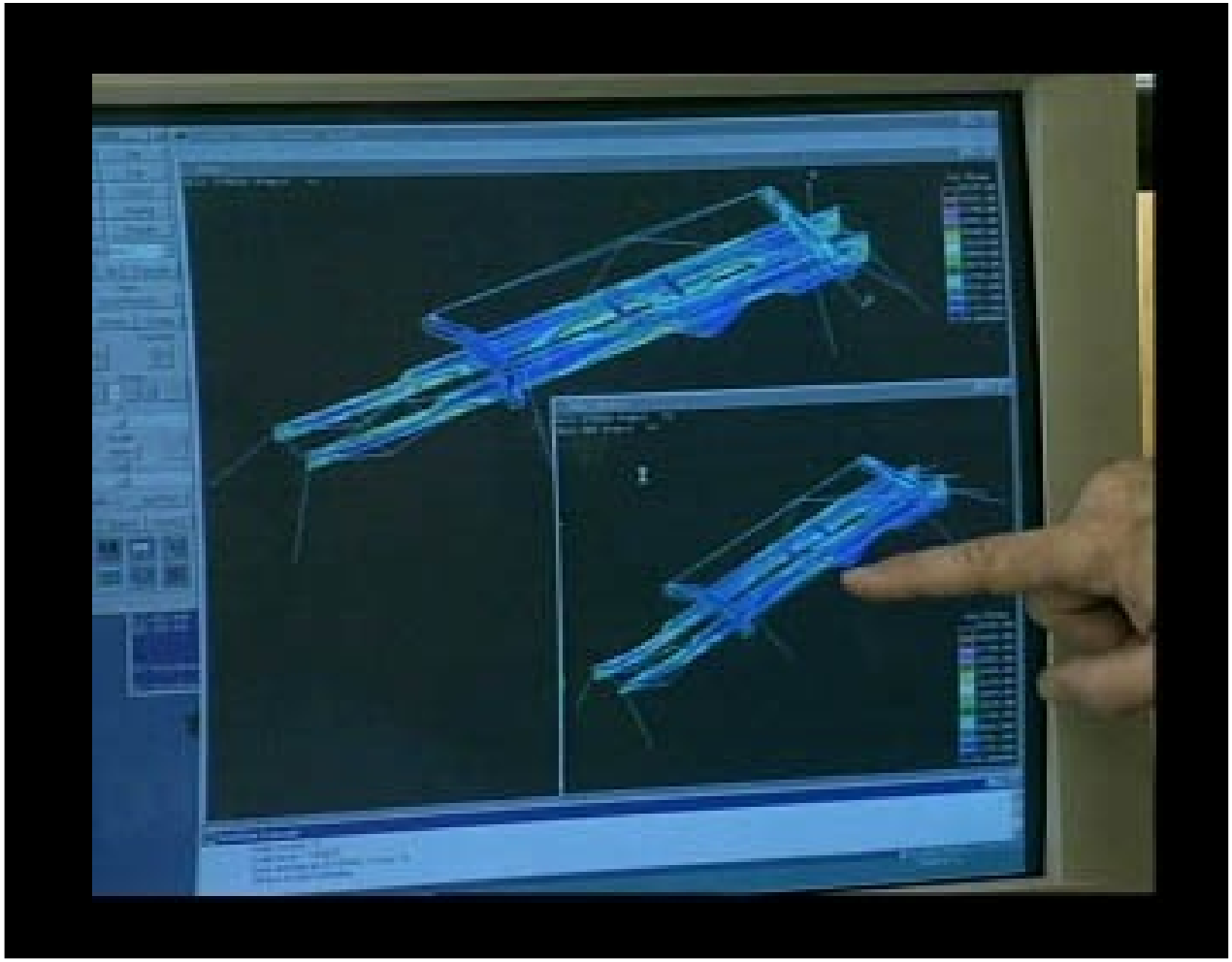
Modeling and Simulation

FEA



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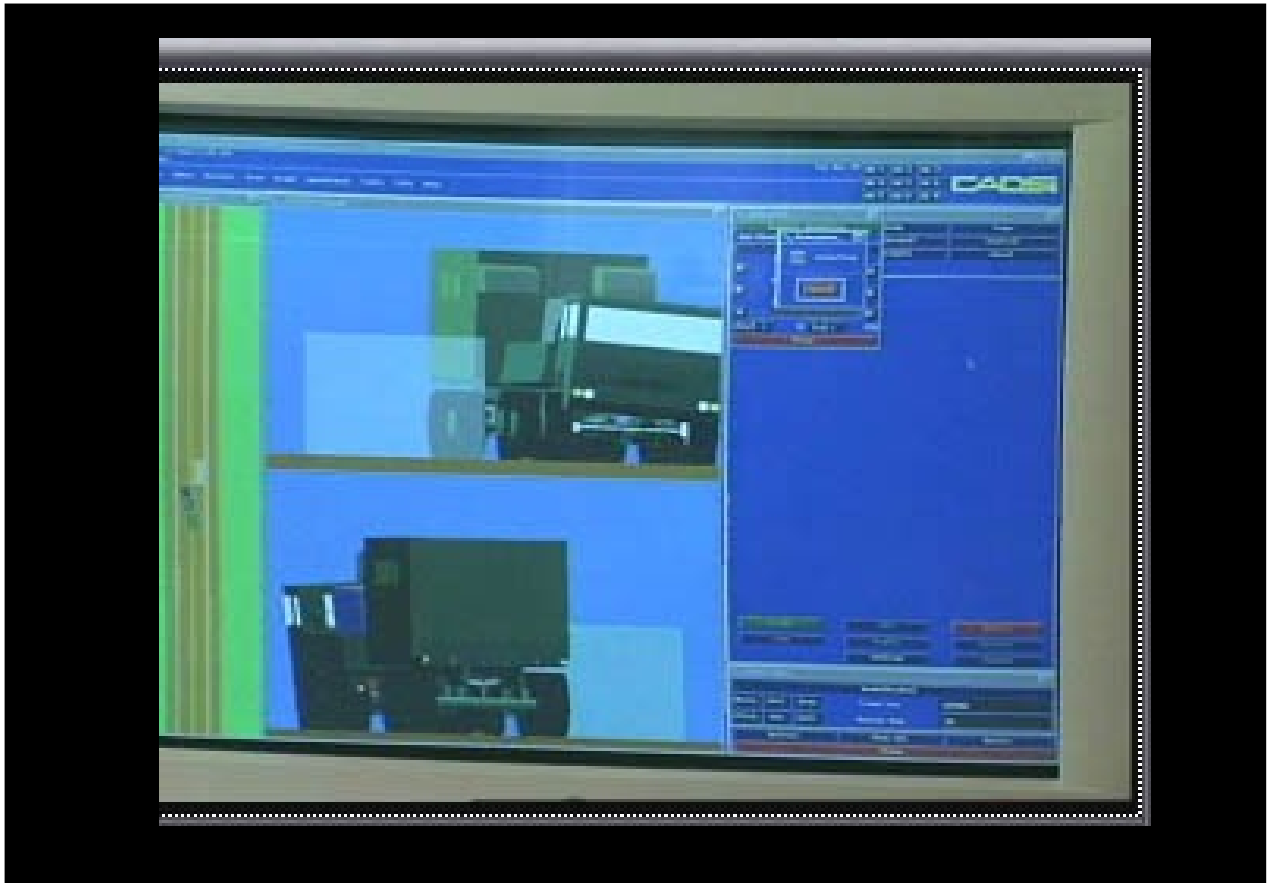
DADS



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Modeling and Simulation

NRMM

SAMPLE FMTV A1 CR NRMM DATA		
Name	**Value**	**Description**
Vehicle Description	**M1078A2 LMTV**	**Cargo Vehicle**
		Drive Train
	Cat 3126	**Engine**
	ALLISON MD 3070PT	**Transmission**
		Transfer Case
		Final Drive
VEHID	**M1078A2**	**Vehicle Identification**
VEHSIU	**0**	**Vehicle data input units (0=English or 1=SI)**
GCW		**Gross Combination Weight**
NVUNTS	**0**	**No. of Tractor/Trailer units in vehicle combination**
Vehicle/Tractor/First Unit		
GVW	**22589**	**Gross Vehicle**
VMI	**265705**	**Sprung mass Pitch Moment of Inertia**
DELTW1	**5000**	**Payload**

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Modeling and Simulation

SCAAN

ALLISON TRANSMISSION DIV • Vehicle Full Throttle Performance • Clutch Fan Engaged							
Veh mph	Engine rpm	Tk effort	Drawbar pull	Wheel hp	Net % grade	Tran BTU/min	ht
Reverse 1, ratio= -6.032 -start, converter operation							
0.00	1800	26565*	26422	0.0	infin	9667	
-2.00	1865	22075*	21929	117.7	431.20	4227	
-3.86	2027	15760	15608	162.2	96.22	2446	.70 TE/WT RATIO
-4.00	2041	15312	15162	163.3	91.12	2405	
-4.60	2103	13510	13355	165.5	73.70	2324	.60 TE/WT RATIO
-5.62	2236	10592	10437	158.7	52.33	2508	
-6.00	2320	9842	9686	157.5	47.67	2305	
-7.02	2600	7199	7040	134.8	32.92	1995	
-7.42	2626	256	96	5.1	0.43	1307	
Forward 1, ratio= 6.929 -low range start, converter operation							
0.00	1800	31105*	30962	0.0	infin	9667	
2.00	1883	24586*	24440	131.1	infin	3634	
4.00	2103	15827*	15677	168.8	97.05	2166	
4.02	2105	15760	15608	168.8	96.21	2165	.70 TE/WT RATIO
4.61	2187	13510	13355	165.9	73.70	2255	.60 TE/WT RATIO

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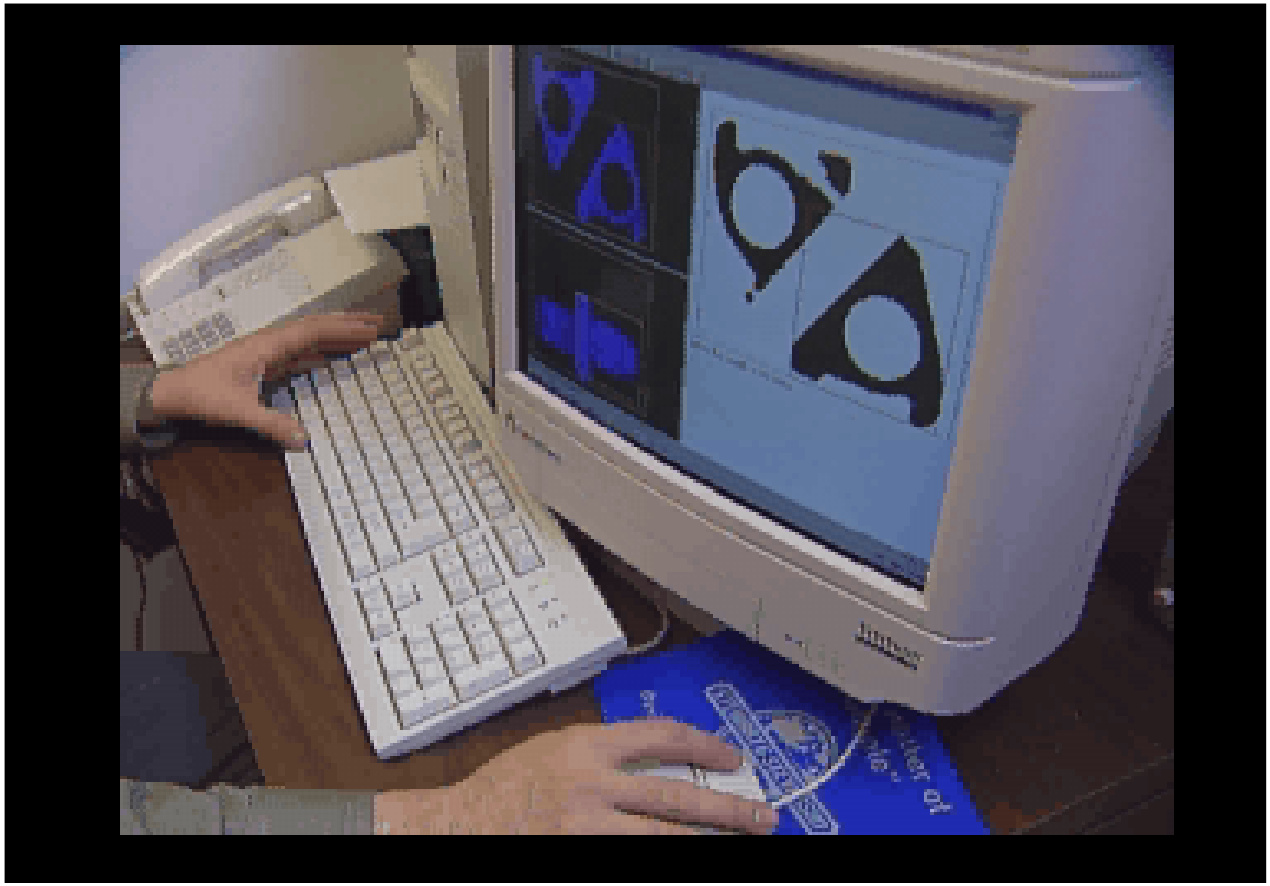
Modeling and Simulation

3D Printer



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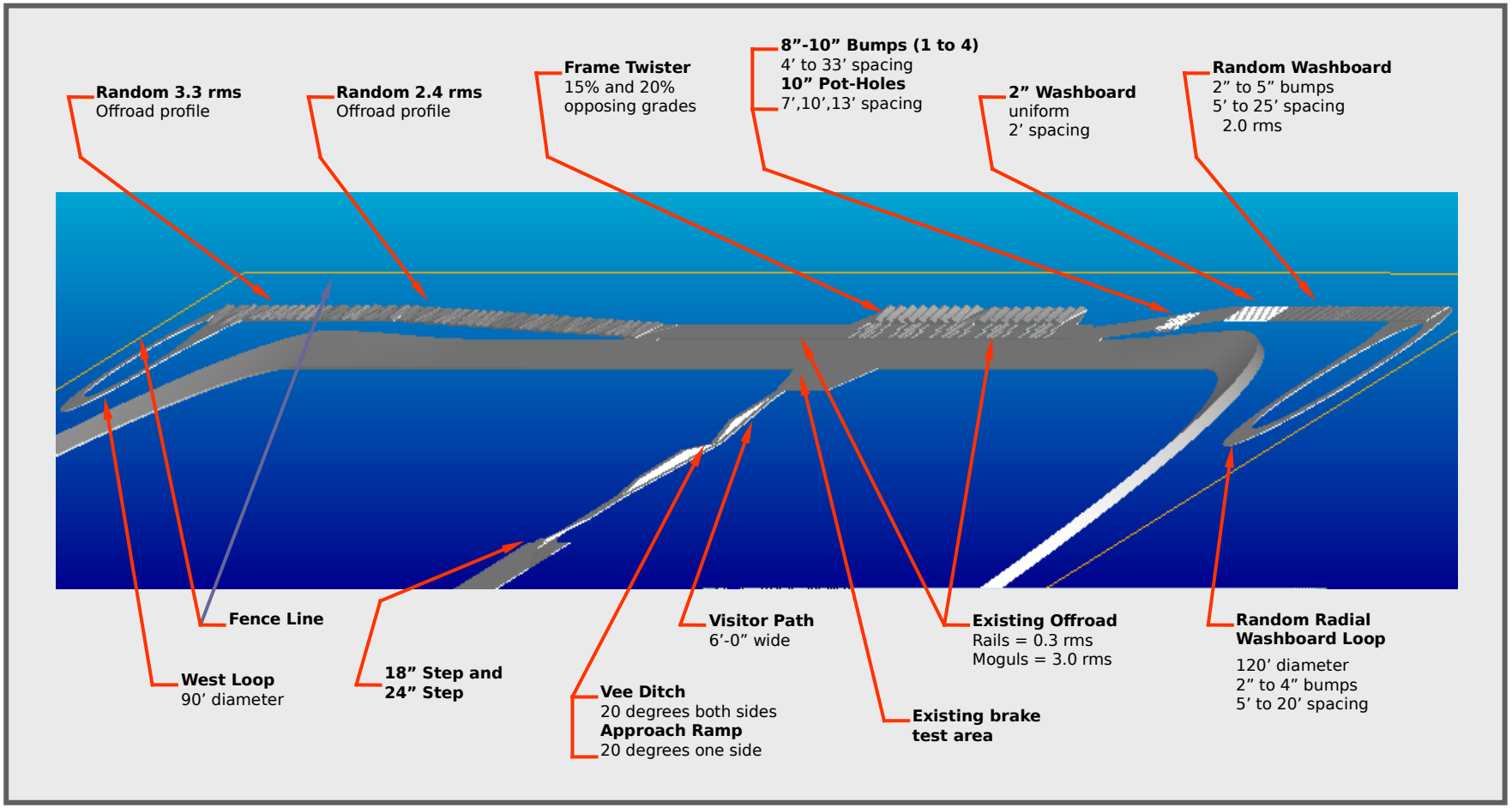
Modeling and Simulation

Test Track



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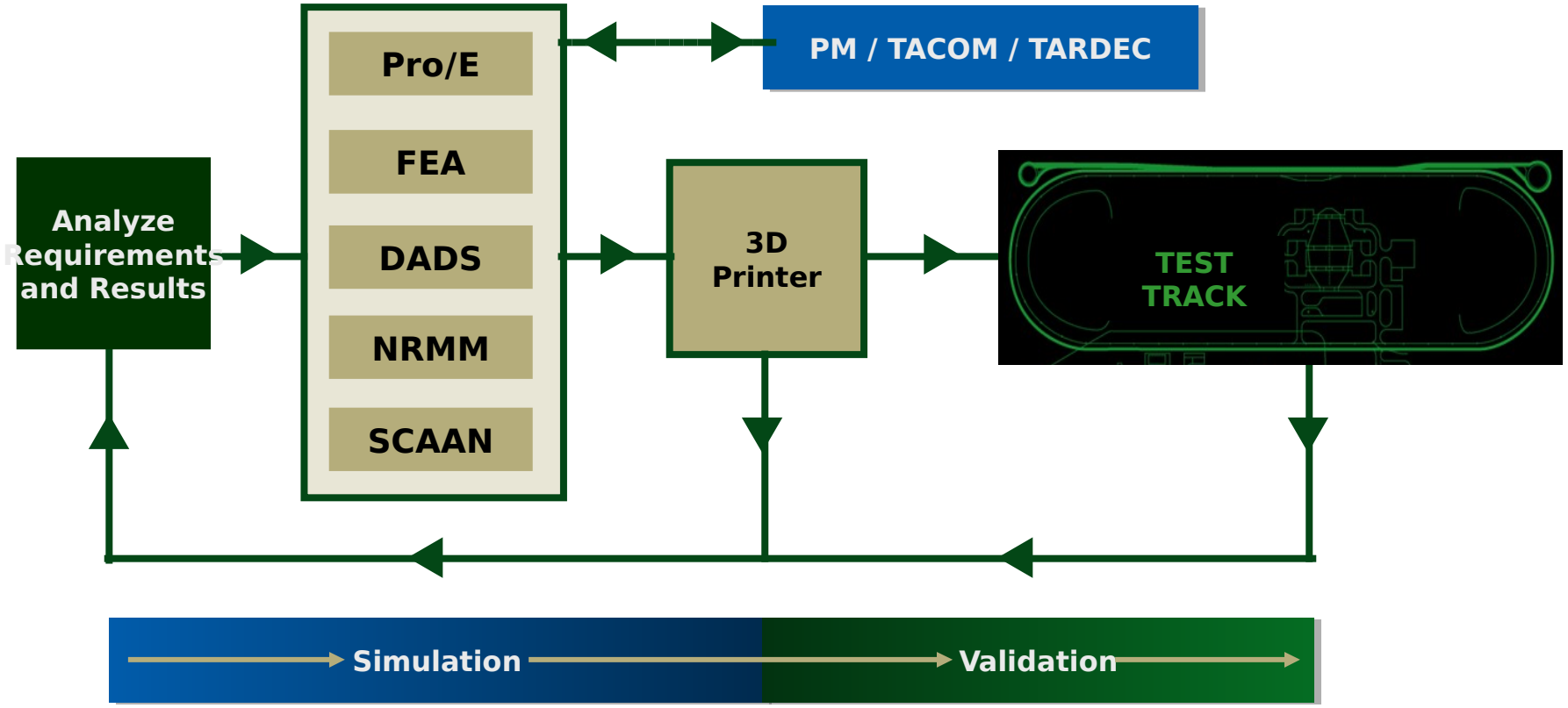

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Regis Luther – Vice President of Engineering

Regis Luther joined Stewart & Stevenson Services, Inc., in December 1991. In 1995 he became the Director of Engineering and reorganized/streamlined/downsized the department for dramatically improved performance. Regis led the team through a product reliability and performance improvement effort that resulted in reliability that surpassed 200%. Completed the development and completion of the vehicle Level III data package and successful 100% Physical Configuration Audit (PCA). Regis was then assigned additional responsibility for Logistics and lead completion of the vehicle Class V, Interactive Electronic Technical Manual (IETM). In After Market Services, he downsized the organization and reduced inventory by 70%, reduced Cost of Goods Sold (COGS) by 37% with profitability improving by 24%. Given the additional responsibility for the quality organization resulted in a department reorganization/downsize where he lead the lean manufacturing implementation of "One Piece Flow" through the assembly operation with a multi-process kaizen. Cycle time was reduced from greater than 54 days to less than 14. Defect reduction showed a corresponding positive trend by decreasing more than 82%. Snapshot metrics were developed, installed and remain in place.

Prior to TVS, Regis was a Senior Test Director at the world's largest outdoor test facility (Aberdeen Test Center). While at ATC, Regis tested nearly every U.S. Army wheeled vehicle in use today. He was also the Test Course Inspection Committee Chairman and lead the change in inspection vehicle from a 151 Jeep to a highly instrumented HMMWV.

Regis graduated from Youngstown State University in Ohio where he received his Bachelor's degree in Chemical Engineering. He received his Master's degree in Chemical Engineering at The Johns Hopkins University and his Executive MBA with honors at the University of Houston. Regis has also completed the Project Management Program conducted through the University of Houston. Regis is a Certified Configuration Manager, Automotive Service Excellence (ASE) Certified Truck Technician and a member of the Society of Automotive Engineers. Regis also holds a first degree black belt in Martial Arts.

Regis and his wife, Becky, have two sons and reside in Houston, Texas. Regis lists his top recreational activities as karate, golf, weight lifting, bike riding and coaching soccer and football.

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